

Notice of Allowability

Application No.

10/696,481

Examiner

Jeffrie R. Lund

Applicant(s)

WOOD, ERIC R.

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/13/06.
2. ☒ The allowed claim(s) is/are 1-27.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Eli A. Loots on March 31, 2006.

The application has been amended as follows:

Claim 1 has been amended to read:

1. (Currently Amended) A chamber, comprising:

a chamber upper wall and a chamber lower wall, each wall having an inner surface and an outer surface and defining an interior space therebetween, said interior space having an inlet and outlet;

a plurality of forward ribs provided on the outer surface of at least one of the chamber upper wall and chamber lower wall in a forward portion of the chamber, said forward portion being defined [as forward of] between the inlet and a central axis of rotation of a substrate support [said chamber]; and

a plurality of rearward ribs provided on the outer surface of at least one of the chamber upper wall and chamber lower wall in a rearward portion of the chamber, said rearward portion being defined [as rearward of] between the outlet and the central axis of rotation of the substrate support [the chamber];

wherein at least some of the forward ribs are positioned to have mirrored

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projections in the rearward portion of the chamber falling substantially between adjacent rearward ribs, and at least some of the rearward ribs are positioned to have mirrored projections in the forward portion of the chamber falling substantially between adjacent forward ribs.

Claim 20 has been amended to read:

20. (Currently Amended) A reaction chamber, comprising:

a chamber upper wall and a chamber lower wall, each wall having an inner surface and an outer surface and defining a reaction space therebetween;

a substrate support provided within said reaction space, said substrate support having a central axis around which said substrate support rotates;

a plurality of forward ribs provided on the outer surface of at least one of the chamber upper wall and chamber lower wall that project a shadow in a [forward] portion upstream of the central axis of the reaction space; and

a plurality of rearward ribs provided on the outer surface of at least one of the chamber upper wall and chamber lower wall that project a shadow in a [rearward] portion downstream of the central axis of the reaction space;

wherein at least some of the shadows of the forward ribs have a mirrored projection in the [rearward] downstream portion of the reaction space that are approximately equidistant from adjacent rearward ribs, and at least some of the shadows of the rearward ribs have a mirrored projection in the [forward] upstream portion of the reaction space that are approximately equidistant from the adjacent forward ribs.

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2. The following is an examiner's statement of reasons for allowance: the chambers as claimed in claims 1, 11, and 20, specifically the placement of the ribs as claimed in: claim 1 the forward ribs are positioned to have mirrored projections in the rearward portion of the chamber falling substantially between adjacent rearward ribs, and at least some of the rearward ribs are positioned to have mirrored projections in the forward portion of the chamber falling substantially between adjacent forward ribs; claim 11 the majority of the shadows formed by the forward ribs have a mirrored projection in the rearward portion of the reaction space that falls substantially between shadows of the rearward ribs, and a majority of the shadows formed by the rearward ribs have a mirrored projection in the forward portion of the reaction space that falls substantially between shadows of the forward ribs; and claim 20 the shadows of the forward ribs have a mirrored projection in the downstream portion of the reaction space that are approximately equidistant from adjacent rearward ribs, and at least some of the shadows of the rearward ribs have a mirrored projection in the upstream portion of the reaction space that are approximately equidistant from the adjacent forward ribs.

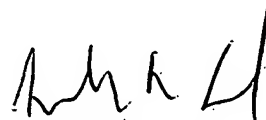
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrie R. Lund
Primary Examiner
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JRL
4/1/06